

**REMARKS****Summary**

Reconsideration of the application is respectfully requested.

Claims 1-23, 25, and 26 remain pending.

**Rejection under 35 USC § 103(a)**

In "Claim Rejections – 35 USC § 103" item 2 on page 2 of the above-identified final Office Action, claims 1-23, 25, and 26 have been rejected as being obvious over U.S. Patent Application No. 2004/16335 to Hampel (hereinafter "Hampel"). or U.S. Patent No. 6,612,084 Rapisarda *et al* (hereinafter "Rapisarda") under 35 U.S.C. § 103.

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, an air grate having the capability of:

allowing air to flow through a plurality of openings disposed in the uncovered portion of the spanned area to meet a semiconductor device manufacturing air flow requirement;

where each of the openings is sufficiently small to meet a semiconductor device manufacturing fall through object size limitation; and

where the one or more materials are further adapted to meet a semiconductor device manufacturing spill protection requirement.

As such, claim 1 recites a novel structural arrangement for an air grate that can simultaneously meet at least three design requirements. These design requirements are conflicting at least at times. For example, an air flow requirement that generally

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calls for more/larger openings, a debris fall through limitation that generally calls for less/smaller openings, and a spill protection requirement that generally calls for lesser/smaller openings.

As described in MPEP 2142, to establish a *prima facie* case of obviousness over the instant application, three basic criteria must be met by the proposed combinations. First, there must be some suggestion or motivation, either in **Hampel** or in the other cited references or in the knowledge generally available to one of ordinary skill in the art, to modify or to combine the teachings of **Hampel** and the other cited references. Second, there must be a reasonable expectation of success. Finally, **Hampel** and the other cited references, when combined, must teach or suggest all the claim limitations of the instant application. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in **Hampel** or the cited references, and not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Further, as described in MPEP 2141, in determining the differences between the prior art and the claims, the question under 35 U.S.C. §103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious in view of **Hampel** and the other cited references. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983). Additionally, prior art must be considered in its entirety, including disclosures that teach away from the claims.

The **Hampel** reference discloses a grate style floor 52 that has been designed to improve ventilation and allow dirt, rocks and liquid to fall through the grate. Therefore, **Hampel** is teaching of requirements are complementary, as opposed to conflicting. The desire to have increased ventilation and the desire to have increased debris fall through, are either satisfied increased amount of openings or by an increase in the size of the openings.

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As indicated in paragraph 0053 of **Hampel**:

Another **advantage** of the grate style floor 52 is that it **improves ventilation** through the building, which is particularly important when it is used as an outhouse, **and** as mentioned above, **dirt, rocks and urine falls through the grate 52**.

In this manner, **Hampel** merely discloses a grate that “improves ventilation” suitable for a building when used as an outhouse and encouraging “**dirt, rocks and urine falls through the grate 52**”. As noted above, each of these requirements are complementary, as opposed to conflicting. **Hampel** does not disclose, teach, or suggest of a grate capable of “allowing air to flow” suitable to “to meet a semiconductor device manufacturing **air flow requirement**” in tension with the requirement that the holes in the grate be “**sufficiently small** to meet a semiconductor device manufacturing fall though object size limitation”, and be adapted to “meet a semiconductor device manufacturing **spill protection requirement**” as recited in claim 1 of the instant application.

When viewing the invention as a whole, the structural arrangement claimed stands for a novel arrangement that can simultaneously meet at least three requirements that are conflicting at times.

**Hampel** teaches a grate that meets certain ventilation and debris fall through requirements. In **Hampel**’s case, the requirements are complementary, as opposed to conflicting, as both, the desire to have increased ventilation and the desire to have increased debris fall through, call for increased amount of openings. Accordingly, **Hampel** does not teach or suggest structural arrangement for an air grate that can simultaneously meet at least three requirements that are conflicting at times.

Moreover, **Hampel** actually teaches away from the claimed invention. Specifically, **Hampel** teaches that holes in the grate are to encourage liquids to drop through the grate (See at least page 1, paragraph 12), while claim 1 includes the

simultaneous meeting of a spill protection requirement (which inherently requires reduction of liquid passing through the grate).

The **Rapisarda** reference discloses of an air grate for a clean room that may provide airflow and structural strength.

As indicated in column 3, lines 55-57 of **Rapisarda**:

The mesh top is **designed to provide the free flow of air therethrough and simultaneously to provide structural strength**. In accordance with one embodiment of the invention, the mesh top is fabricated from stainless steel and has openings of about 1 inch by 4 inches. The mesh top can be about 1 1/2-2 inches in height and the apron is preferably about 4-5 inches in height.

Thus, **Rapisarda** merely teaches of an air grate that simultaneously meets only two requirements that may be conflicting. Accordingly, **Rapisarda** does not teach or suggest an air grate that simultaneously meet at least three requirements that are conflicting at times.

Specifically, **Rapisarda** fails disclose, teach, or suggest of a grate capable of "allowing air to flow" suitable to "to meet a semiconductor device manufacturing air flow requirement" in tension with the requirement that the holes in the grate be "sufficiently small to meet a semiconductor device manufacturing fall through object size limitation", and be adapted to "meet a semiconductor device manufacturing spill protection requirement" as recited in claim 1 of the instant application.

Therefore, Claim 1 is non-obvious and is patentable over either **Hampel** or **Rapisarda** whether taken together or separately. Withdrawal of the rejection of Claim 1 for obviousness is requested.

Claims 9, 16, and 23 contain substantially the same limitations as Claim 1. Thus, for at least the same reasons, Claims 9, 16, and 23 are not obvious and patentable over either **Hampel** or **Rapisarda** individually or in combination.

Claims 2-8, 10-15, 17-22, and 25-26 are dependent upon Claims 1, 9, 16, and 23 respectively and are therefore patentable for at least the above-stated reasons.

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Applicant respectfully requests that the rejections against Claims 2-8, 10-15, 17-22, and 25-26 be withdrawn.

Claims 7, 8, 14, 15, and 22, in addition to the reasons noted above, are not obvious and are allowable over the cited references, **Hampel** or **Rapisarda**.

Claims 7, 14, and 22 requires, *inter alia*, that one or more materials of the grate be capable of having a post installation **raised height of about 0.5 inches** to meet the semiconductor device manufacturing spill protection requirement. Neither **Hampel** nor **Rapisarda** teach or suggest of the limitation requiring the grate to have "a post installation **raised height of about 0.5 inches** to meet the semiconductor device manufacturing spill protection requirement". Therefore, for at least this additional reason, Claims 7, 14, and 22 are not obvious and are patentable over either **Hampel** or **Rapisarda** individually or in combination. Accordingly, withdrawal of the rejection for Claims 7, 14, and 22 for obviousness is requested.

Claims 8 and 15 requires, *inter alia*, that one or more materials of the grate be capable of covering the perimeter of the spanned area with an **inwardly inclined edge** to meet the semiconductor device manufacturing spill protection requirement. Neither **Hampel** nor **Rapisarda** teach or suggest of the limitation requiring the grate be capable of "covering the perimeter of the spanned area with an **inwardly inclined edge** to meet the semiconductor device manufacturing spill protection requirement". Therefore, for at least this additional reason, Claims 8 and 15 are not obvious and are patentable over either **Hampel** or **Rapisarda** individually or in combination. Accordingly, withdrawal of the rejection for Claims and 15 for obviousness is requested.

In the event that Examiner should still find a grate as recited in Claims 1, 7, 8, 9, 15-16, 22, and 23 to be obvious, Applicants respectfully request that the Examiner provide references that show each of the limitations cited.

Alternately, if the Examiner is taking "Official Notice" that the grate of claims 1, 7, 8, 9, 15-16, 22, and 23 are obvious, and relying on personal knowledge to support the

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finding of what is known in the art, the Examiner is requested to provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2) and MPEP 2144.03.

Conclusion

In view of the foregoing, Applicant respectfully submits that Claims 1-23, 25-26 are in condition for allowance. Entry of the foregoing remarks is requested and a Notice of Allowance is earnestly solicited. Please contact the undersigned at (206) 407-1504 regarding any questions or concerns associated with the present matter.

Respectfully submitted,  
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